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Diversity of bacterial endophytes in roots of Mexican husk tomato plants (*Physalis ixocarpa*) and their detection in the rhizosphere

H.A. Marquez-Santacruz[1], R. Hernandez-Leon[1], M.C. Orozco-Mosqueda[2], I. Velazquez-Sepulveda[1] and G. Santoyo[1]

[1]Laboratorio de Recombinacion y Diversidad Genomica,
Instituto de Investigaciones Quimico Biologicas,
Universidad Michoacana de San Nicolas de Hidalgo Morelia,
Michoacan, Mexico
[2]Laboratorio de Ecología Microbiana,
Instituto de Investigaciones Quimico Biologicas,
Universidad Michoacana de San Nicolas de Hidalgo Morelia,
Michoacan, Mexico

Corresponding author: G. Santoyo
E-mail: gustavo_santoyo@yahoo.com/gsantoyo@umich.mx

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ABSTRACT. Endophytic bacterial diversity was estimated in Mexican husk tomato plant roots by amplified rDNA restriction analysis and sequence homology comparison of the 16S rDNA genes. Sixteen operational taxonomic units from the 16S rDNA root library were identified based on sequence analysis, including the classes Gammaproteobacteria, Betaproteobacteria, Actinobacteria, and Bacilli. The predominant genera were *Stenotrophomonas* (21.9%), *Microbacterium* (17.1%), *Burkholderia* (14.3%), *Bacillus* (14.3%), and *Pseudomonas* (10.5%). In a 16S rDNA gene library of the same plant species' rhizosphere, only common soil bacteria, including *Stenotrophomonas*, *Burkholderia*, *Bacillus*, and

Pseudomonas, were detected. We suggest that the endophytic bacterial diversity within the roots of Mexican husk tomato plants is a subset of the rhizosphere bacterial population, dominated by a few genera.

Key words: Endophytes; Bacterial diversity; Rhizosphere; Mexican husk tomato plants

